Appl. No.

: 09/883,851

Filed

June 18, 2001

AMENDMENTS TO THE SPECIFICATION

In the following, insertions are underlined (e.g., <u>insertion</u>), and deletions are struckthrough or in double brackets (e.g., <u>deletion</u> or [[deletion]]).

Please amend the paragraph beginning at page 9, line 6 as indicated below:

1993 1

The targets 18 of the present embodiment are constructed of a scandium titride tritide layer deposited on a copper (Cu) substrate, both substances which are well known in the material sciences, the targets having the desirable property of generating a stream of neutrons (neutrally charged nucleons) and alpha particles (ionized helium nuclei) when properly excited by the incident deuteron-tritium ion beam 10. It can be appreciated, however, that other types of targets and materials may be used in this application.

Please amend the paragraph beginning at page 9, line 12 as indicated below:

Neutrons are created in the target(s) according to the following exemplary reactions:

$${}_{1}H^{2} + {}_{1}H^{3} + {}_{2}He^{4} + {}_{0}n^{1} + 14 \text{ MeV}}$$

$${}_{1}H^{2} + {}_{1}H^{2} + {}_{2}He_{3} + {}_{0}n^{1} + 3.27 \text{ MeV}}$$

$${}_{1}H^{3} + {}_{1}H^{3} + {}_{2}He^{4} + {}_{0}n^{1} + {}_{0}n^{1} + 11.33 \text{ MeV}}$$

$${}_{1}H^{2} + {}_{1}H^{3} \rightarrow {}_{2}He^{4} + {}_{0}n^{1} + 14 \text{ MeV}}$$

$${}_{1}H^{2} + {}_{1}H^{2} \rightarrow {}_{2}He^{3} + {}_{0}n^{1} + 3.27 \text{ MeV}}$$

$${}_{1}H^{2} + {}_{1}H^{2} \rightarrow {}_{2}He^{3} + {}_{0}n^{1} + 3.27 \text{ MeV}}$$

$${}_{1}H^{3} + {}_{1}H^{3} \rightarrow {}_{2}He^{4} + {}_{0}n^{1} + {}_{0}n^{1} + 11.33 \text{ MeV}}$$

Note that the energy of the incident deuteron/tritium ion beam 10 must be sufficient to overcome any coulombic interaction with the positively charged nuclei of the target material atoms. Deuteron/tritium ion energies of 0.05 MeV or greater have been found sufficient for this purpose.